ALARKO

Water Boosters

ALD 400-600 Series

New Electronic Control System

TSEK

Alarko Water Boosters

Certain solution for water problem by high quality, efficient water boosters. In order to pressurize the drinking, usage, process and irrigating waters continuously in safe and economical conditions...

ALD 400-600 Series

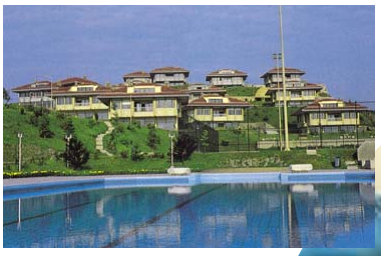
QUALITY PRODUCT

NEW SERIES intelligent electronical control box ensuring ease of usage and servicing, balancing the operation.
Reliable capacities. Quiet and non-stop water comfort.
Low operational cost, low current consumption.
Valve included. Ready to use.
Protected for usage without water.
Packaged system.
Easy mounting.
No maintenance, no problem.

QUALITY SERVICE

Alarko water boosters are throughout the world with service warranty of Alarko Carrier which is the leading company in water boosters and water pressurizing area. Right product selection and right mounting by qualified and authorized distributors. 2 years warranty. Original spare parts.

Maximum 123 m^3/h flow rate, wide model and capacity range for various conditions up to 10 bar pressure. 21 models of single pump, 21 models of two pumps, 21 models of three pumps, in total 63 models.



Villas, apartments and group of buildings

District,village, small town and towns

Hospitals, schools and commercial buildings

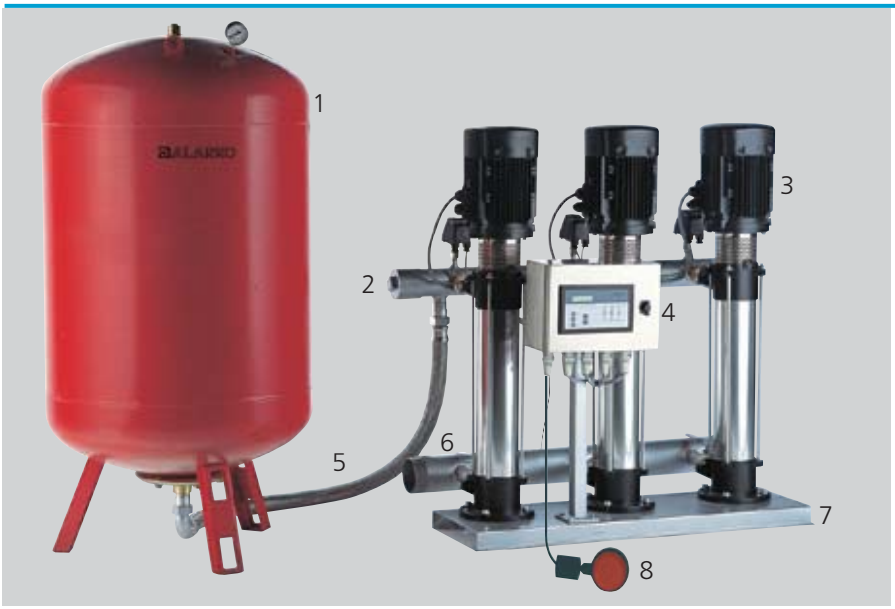
Hotels, social facilities and holiday villages

Gardens and parks

Depot, refinery, dockyard, factory, water treating and industrial facilities

Farms and greenhouses

Reliable High Technology



1. MEMBRANED TANK: Stores pressurized water, decreases starts and stops of pumps. Prevents the fittings from shocks and vibrations. Hygenic and scentless. Not included in standard water booster set, sold separately. (Page 11)

2. OUTLET COLLECTOR: Galvanized. The check valve on the output of the pump prevents the pressurized water from going back to the pump. There are manometer and pressure switches on it.

3. MOTOR: Special design for vertical operating conditions. 380 V, 3 phases, 50 Hz. Protected from excess currents.

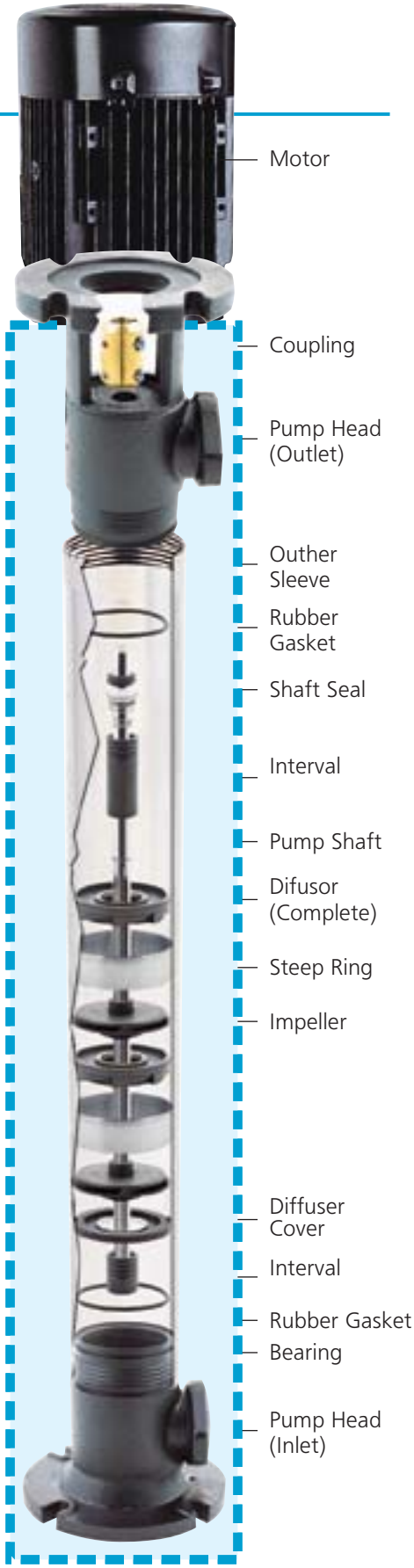
4. CONTROL PANEL: Intelligent Electronical Control Management System for multi pump Alarko water boosters. (Page 4). Thermal protected contactor for single pump water boosters and ON/OFF switch.

5. FLEXIBLE HOSE: Provides the water connection between the pump group and membraned tank. Stainless steel. Mounting is very easy, no proficiency required. Obtains flexibility in placing the tank. Sold separately.

6. INLET COLLECTOR: Galvanized. There are spherical valves on the inputs of each pump in two and three pump water boosters. So, in case one of the motopumps break down, the other continues to supply water and the broken one can be removed to be fixed.

7. BASE: Galvaniized. Can be easily fixed on the ground. Prevents noise and vibration.

8. FLOAT SWITCH: Prevents the water booster from operating in case the reservoir goes out of water. When it is full, the water booster starts automatically.



PRESSURE SWITCH:
On the outlet line. Start and stop the pumps to obtain the pressure in the plumbing.
The number of switches are as much as the number of the pumps. They are adjusted in the factory as to operate the pumps at the most efficient point.

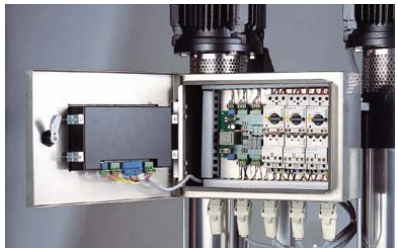
PUMP MATERIAL:
High quality, suitable for various operating conditions.

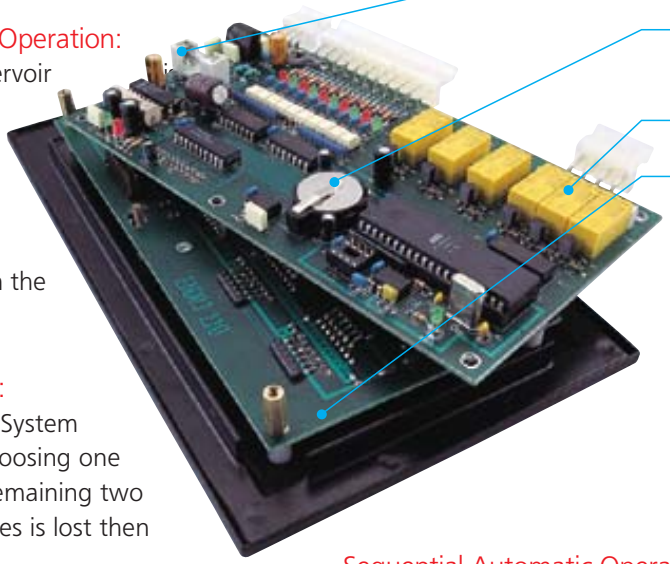
Pump Heads	GG20
Outher Sleeve	Stainless, X2CrNi1911/X2CrNiMo17122
Pump Shaft	Stainless, X46Cr13
Diffusor	%30 Glass reinforced PPO
Impeller	%30 Glass reinforced PPO
Shaft Seal	Ceramic,Carbon
Coupling	Bronze

New Age Intelligent Electronical Control Management

Electronical Microprocessor control management system, brings a safe and economical usage by controlling the operational functions of the two and three pumps water boosters. The control management system, collected in compact inner and outer designed box, is delivered mounted on the water boosters and connected.

The LCD display is mounted on the cover of the control box to be seen easily. It is easy to use and every operation can be followed up from that display.





Operator Panel Protection:
2A glass fuse before 24 VAC input.

3,2 V Ni-Cd Battery. Protects the data in case of a power failure.

Microprocessor board.

Screen Board.

Protection for Waterless Operation:

The water level in the reservoir continuously by level electrodes and water relay.Electronical management system prevents the pumps from operating if water is not in the required level.

Motor Phase Protection:

Electronical Management System prevents the motor from loosing one phase and operate with remaining two phases. If one of the phases is lost then motor is stopped.

Phase Order Control:

Electronical Management System controls each of the motors to see if the phase connections are in the correct order. It prevents the pumps to turn in the wrong direction.

False Pressure Signal Protection:

Electronical Management System prevents the pumps from operating in case of sudden changes in water pressure.

Excess Current Control:

Electronical Management System protects the motor from breaking down in case of excess current is consumed by cutting the power.

Sequential Automatic Operation:

Electronical Management System manages the pumps to operate sequentially in order to keep the adjusted facility pressure and stop when the usage decreases.

- The first operating pump changes in every usage automatically.
- So, the usage times of motor and pumps are equalized.

1.LCD Display: The informations like operation mode (manual/automatic) of the water booster, total operation time of each pump, operating or stopped pumps, (if present) malfunction type (wrong direction, phase protection, excess current, waterless operation) can be reached by this display.

The panels vary according to the number of pumps.

2. Manual mode/esc button and LED
3. Automatic mode button and LED
4. Changing the parameters
5. Parameter changing mode and scroll between parameters
6. Manual operation of the pumps
7. “Pump in operation” LED
8. “Pump malfunction” warning LED

Water boosters which are manufactured thinking of you, together with you...

Alarko, leading the research and development studies of underwater pumps,circulation pumps and water pressurizing systems of future technology in 60s and 70s, became the developer of the domestic products in the water booster sector.

In Turkey, there is a past between Alarko and the water booster users of 40 years. There is a relation, which has been tested, sincere, full of intimacy, lifetime lasting, improving and widening. Alarko has never left anyone on halfway.

Alarko, thought the best for everyone who had selected it. Always aimed to meet their requirements. Alarko was happy when they are happy. Gained much more than what it has invested. The words "much more than" don't mean material. It is the confidence of 40 years.

The "magic" formula behind this success is "Quality in Manufacturing and Service"

Continuously innovating mentality...

Alarko water boosters are result of 40 years' experience.
Alarko water boosters are being continuously improved by taking notice of varying needs and technologies.
They are manufactured conforming with the quality conditions in ISO 9001 certified facilities and watertightness and performance tests are applied to each of the water boosters.

Everthing is "first class"

Alarko Carrier presents "first class" engineering and free information to the customers with world wide experienced seller network.
All information, prices and selection tool can be reached by internet from the address www.alarko-carrier.com.tr

Technical Specifications

TYPE	Motor Power (HP)	Water Inlet/Outlet (inches)*	Tank Connection (inches)**	Weight (kg)
403/10-1	1	1"-1"	1"	37
403/15-1	1,5	1"-1"	1"	40
403/16-1	2	1"-1"	1"	44
406/11-1	2	1"-1"	1"	42
406/15-1	3	1"-1"	1"	50
406/18-1	4	1"-1"	1 1/2"	57
408/10-1	3	1 1/2"-1 1/2"	1 1/2"	40
408/14-1	4	1 1/2"-1 1/2"	1 1/2"	50
408/17-1	5,5	1 1/2"-1 1/2"	1 1/2"	65
610/8-1	4	1 1/2"-1 1/2"	1 1/2"	96
610/10-1	5,5	1 1/2"-1 1/2"	1 1/2"	107
610/12-1	7,5	1 1/2"-1 1/2"	1 1/2"	115
615/7-1	5,5	1 1/2"-1 1/2"	1 1/2"	105
615/9-1	7,5	1 1/2"-1 1/2"	1 1/2"	113
615/10-1	10	1 1/2"-1 1/2"	1 1/2"	120
620/7-1	7,5	2"-2"	2"	111
620/8-1	10	2"-2"	2"	118
620/9-1	10	2"-2"	2"	119
631/6-1	15	2"-2"	2"	139
631/7-1	15	2"-2"	2"	140
631/8-1	15	2"-2"	2"	141

TYPE	Motor Power (HP)	Water Inlet/Outlet (inches)*	Tank Connection (inches)**	Weight (kg)
403/10-2	1	2"-1 1/2"	1"	87
403/15-2	1,5	2"-1 1/2"	1"	92
403/16-2	2	2"-1 1/2"	1"	97
406/11-2	2	2"-1 1/2"	1"	102
406/15-2	3	2"-1 1/2"	1"	110
406/18-2	4	2"-1 1/2"	1 1/2"	81
408/10-2	3	2 1/2"-2"	1 1/2"	70
408/14-2	4	2 1/2"-2"	1 1/2"	79
408/17-2	5,5	2 1/2"-2"	1 1/2"	100
610/8-2	4	3"-2 1/2"	1 1/2"	135
610/10-2	5,5	3"-2 1/2"	1 1/2"	157
610/12-2	7,5	3"-2 1/2"	1 1/2"	171
615/7-2	5,5	3"-2 1/2"	1 1/2"	155
615/9-2	7,5	3"-2 1/2"	1 1/2"	169
615/10-2	10	3"-2 1/2"	1 1/2"	182
620/7-2	7,5	4"-3"	2"	175
620/8-2	10	4"-3"	2"	183
620/9-2	10	4"-3"	2"	185
631/6-2	15	4"-3"	2"	225
631/7-2	15	4"-3"	2"	227
631/8-2	15	4"-3"	2"	229

TYPE	Motor Power (HP)	Water Inlet/Outlet (inches)*	Tank Connection (inches)**	Weight (kg)
403/10-3	1	2 1/2"-2"	1"	102
403/15-3	1,5	2 1/2"-2"	1"	127
403/16-3	2	2 1/2"-2"	1"	113
406/11-3	2	2 1/2"-2"	1"	162
406/15-3	3	2 1/2"-2"	1"	170
406/18-3	4	2 1/2"-2"	1 1/2"	105
408/10-3	3	3"-2 1/2"	1 1/2"	100
408/14-3	4	3"-2 1/2"	1 1/2"	108
408/17-3	5,5	3"-2 1/2"	1 1/2"	135
610/8-3	4	4"-3	1 1/2"	174
610/10-3	5,5	4"-3	1 1/2"	207
610/12-3	7,5	4"-3	1 1/2"	227
615/7-3	5,5	4"-3	1 1/2"	205
615/9-3	7,5	4"-3	1 1/2"	225
615/10-3	10	4"-3	1 1/2"	244
620/7-3	7,5	5"-4"	2"	239
620/8-3	10	5"-4"	2"	248
620/9-3	10	5"-4"	2"	251
631/6-3	15	5"-4"	2"	311
631/7-3	15	5"-4"	2"	314
631/8-3	15	5"-4"	2"	317

Notes: Pipe diameters are for galvanized pipes. The inner diameters of plastic pipes are narrower than galvanized pipes. In case plastic pipes will be used, it should meet the inner diameter of galvanized pipe.
(*) Water inlet and outlet diameters are equal on the pump. But suction fittings should be wider than it. For example, if inlet is 2" then the suction fittings should be 2,5",etc.

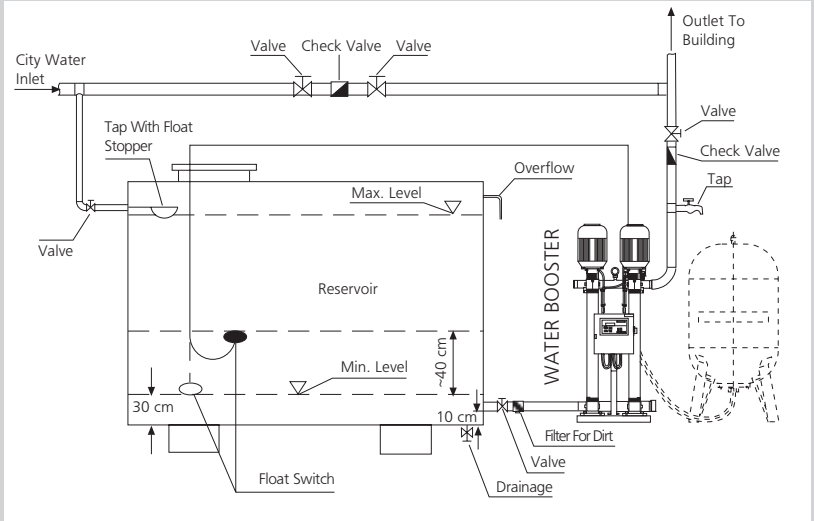
CORRECT USAGE

- Water booster should never be operated without water.
- The air inside the pump should be removed before operating.
- The level indicators and electrods, which are given with the water boosters, should be placed in the reservoir.
- The air pressure of the membrane tank should be 0,5 bar lower than the operating pressure. The air pressure should be checked periodically.
- While compressing air in the membraned tank or measuring the pressure, the tank should be empty.
- Water temperature should be between 0-35°C and environment temperature should be maximum 40°C.
- The water should not be allowed to freeze in the water booster.

CORRECT INSTALLATION

- The suction should not be from a lower height for the water boosters.
- The water booster should not be directly attached to the city network.
- It should not be difficult for the pumps to absorb the water. So, water booster suction diameters should not be made smaller. The pump should be one degree wider than the water inlet diameter for single pump water boosters, the suction fittings should be as the suction collector for two or three pumps water boosters.
- The inner diameters of plastic pipes are narrower than galvanized pipes. In case plastic pipes will be used, it should meet the inner diameter of galvanized pipe.
- The base should be fixed on the ground (on rubber battens if possible) in order not to make noise.

ASSEMBLY WATER BOOSTER DIAGRAM



STANDARD DELIVERY CONTENTS

- Ready to use compact electronical connection box.
- Suction collector on which valves are mounted to the outlet of each pump, and manometer.
- Float switch for controlling the water level.
- User manual and authorized services list.

SUPPLIED MATERIALS

- Membraned tank (certainly should be used)
- Steel weaved flexible hose for membraned tank-motopump connection.
- Membraned tank air manometer.

Critical Point: Selecting the correct water booster

SELECTION CIRITERIA

- When deciding for a water booster, its the operation range should be on top of the pump efficiency graphic.
- Two or three pumps water booster can be used instead of one pump hydrophor. In this case, noise and pressure effects because of a big pump's operation, will not appear. For example, three 5 m^3/h pump water booster or two 7,5 m^3/h pump water booster could be used instead of one 15 m^3/h pump water booster.
- Multi pump water booster, if suitable, can be used as a spare water booster. So, in case one pump breaks down, the other pump(s) should supply the required flow rate. For example, if the flow rate should be 10 m^3/h, two 10 m^3/h pump or three 5 m^3/h pump water booster could be selected.

How to Select

The required pressure (Hm) and flow rate (Q) values should be known for selecting a water booster. Calculating Hm and Q values:

Required Pressure=Hmin(mSS)=h+h+15

h – The height in meters between the water booster location and the highest storey.

h – It is the loss in pressure because of the valve, meter and calcificated pipes. h is assumed as 0,2 times h.

$\Delta h = 0.2h$

15 – The value estimated from the required pressure, which should be present in the highest storey. For example, 15 meters for 1,5 bar pressure. If required pressure changes then that value changes, too.

Required Flow Rate=Q(m^3/h)=#of flats x #of persons in the flat x Daily Personal Consumption x F/1000

Daily Personal Consumption (lt/day) value is selected from Table 1.

F – Same time usage factor shows the maximum water usage of the inhabitants at the same time. It is selected from Table 2.

Table 1: Daily Personal Consumption

Settlement Type		Daily Personal Consum (lt/per.)
House	Hand-basin	60-80
	Shower	80-115
Hotel	Basin	120-200
	Shower	100
	Basin	150-200
Hospital		200-500
School		5
Pre-school		80-100
Créche		100-150
Barracks		60-80
Restaurant		10-20
Gardening		1,5 lt/m^2 each
Car wash		100 lt/day

Table 2: Same Time Usage Factor

Settlement Type		Faktör
Houses	1-5 st.	0,66
	6-10 st.	0,45
	11-20 st.	0,40
	21-50 st.	0,35
	51-100 st.	0,30
	100 + sto	0,25
Hotels	1-20 beds	0,40
	21-50 beds	0,40-0,30
	50 + beds	0,30-0,20
Hospitals	50-500 beds	0,30-0,20
	501-1000 beds	0,20-0,15
	1001-2000 beds	0,15-0,10
Schools		0,30
Pre-school		0,40
Barracks		0,40-0,30
Commercial Building		0,30

Selection Example 1:

Water booster selection for 7 storeys 21 flats building.

Calculating the required pressure:

h = (7 storeys + 1 basement) x 2,8 m (h of one storey) = 22,4 m

Δh = 0,2 x h = 0,2 x 22,4 m = 4,48 m.

Gerekli Min. Basınç = Hmin = 22,4 + 4,48 +15 = 41,88 mSS= 4,1 bar.

Number of flats = 21

Daily Personal Consumption= 100 lt/day (Table 1)

F – Factor=0,35 (Table 2)

Required Flow Rate = Q = 21x5x100x0,35/1000

= 3,6 m^3/h

(It is assumed that 5 persons are living in each flat)

Selecting the Water Booster:

According to the above calculation, pressure range is 40-60 meters or 40-70 meters and 403/10-1 or 403/15-1 types can be selected for they can supply 3,5 m^3/h flow rate in this pressure range.

Selection Example 2:

Water boosters selection for 9 storeys 30 rooms hotel.

Calculating the required pressure:

h=(9 storeys+1 basement) x 2,8m (h of one storey) = 28 m

h=0,2 x h=0,2 x28 m=5,6 m

Min required pressure = Hmin=28+5,6+15

= 48,6 mSS=50 mSS=5 bar

Daily Personal Consumption= 150 lt/day (Table 1)

F – Factor=0,3 (Table 2)

Required Flow Rate = Q = 270 rooms x 2 beds

x150x0,3/1000 = 24,3 m^3/h

(It is assumed that 2 beds are present in each room)

Selecting the Water Boosters:

According to the above calculation, pressure range is 50-70 meters or 50-80 meters and 631/7-1 or 408/14-3 (50-70 range), 610/10-2 (50-80 range) types can be selected for they can supply 24,3 m^3/h flow rate in this pressure range.

EASY AND QUICK SOLUTION FROM WEB

Hydrophors can be quickly selected from the selection tool in www.alarko-carrier.com.tr The prices can be learned and price offer can be prepared.

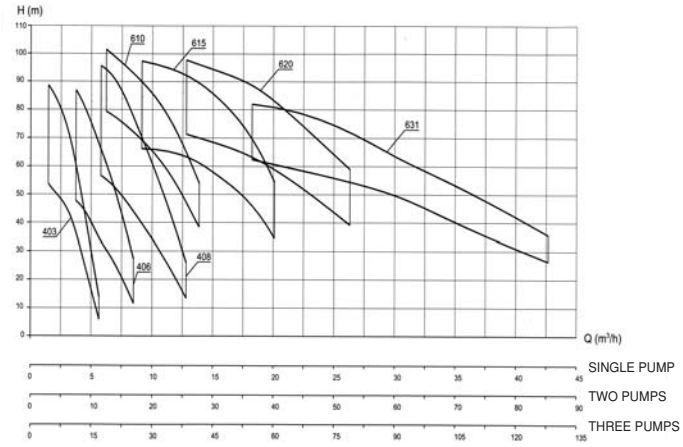
ORDER NOTATION

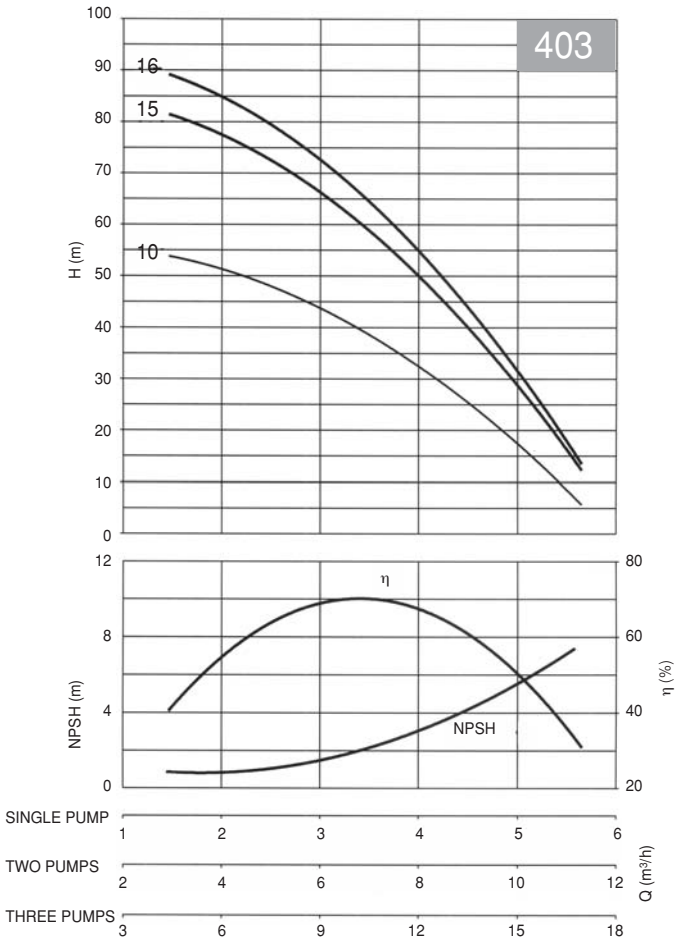
ALD 6 10 / 8 - 3

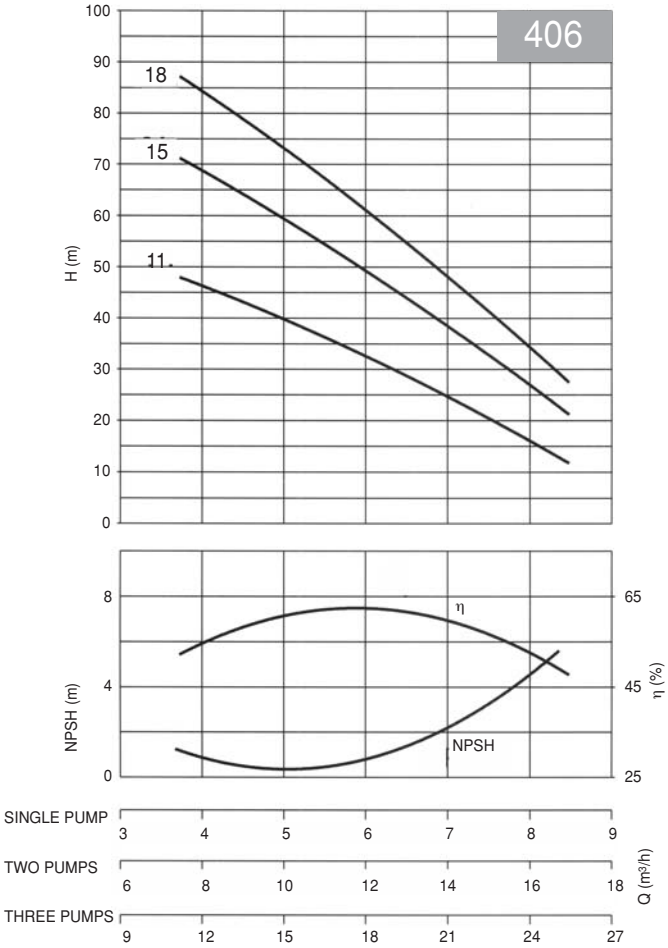
- 3 – Number of Pumps
- 8 – Steps
- 10 – Nominal Flow Rate (m^3/h)
- 6 – Pump Case Diameter (inches)
- ALD – Type

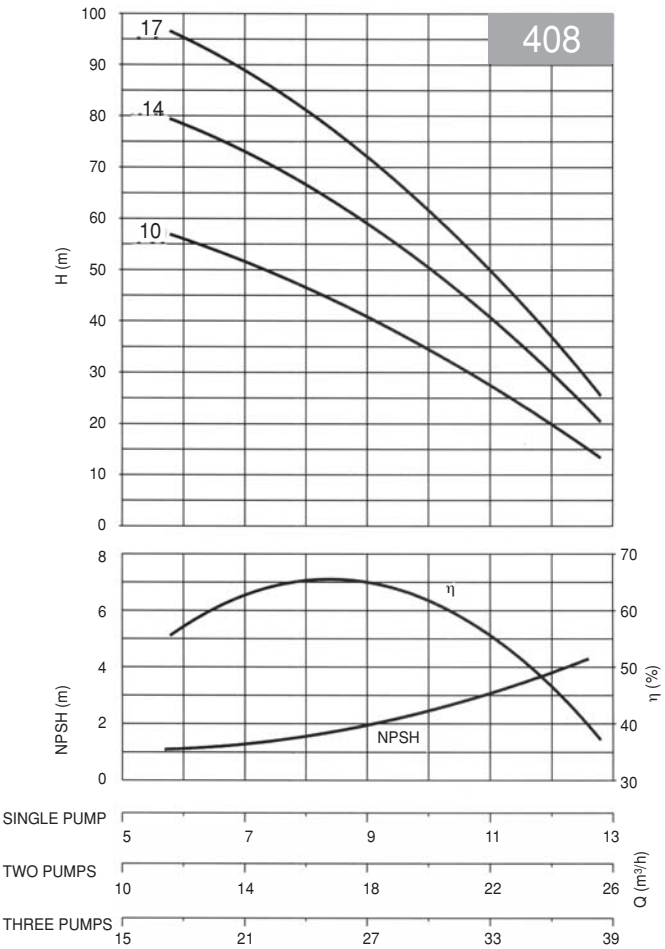
ALD 400 Series Pump Performance Curves

General Charts

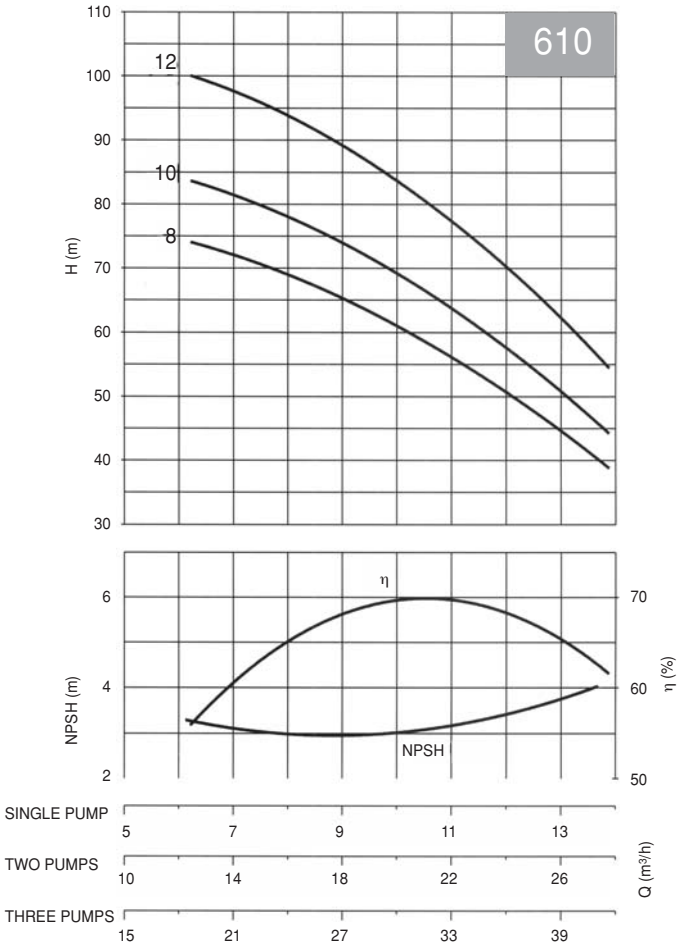


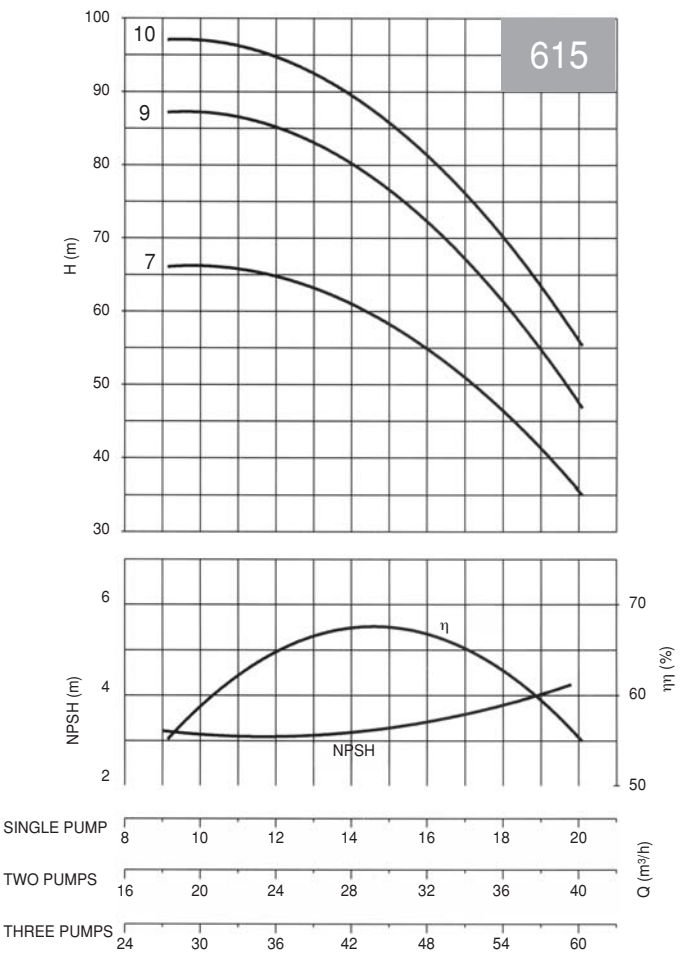


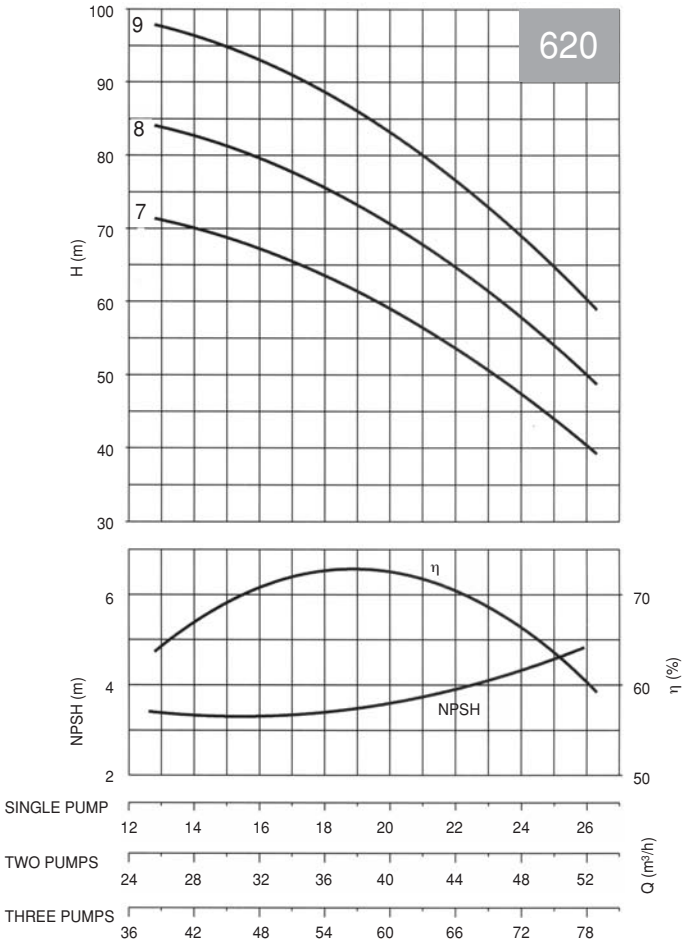


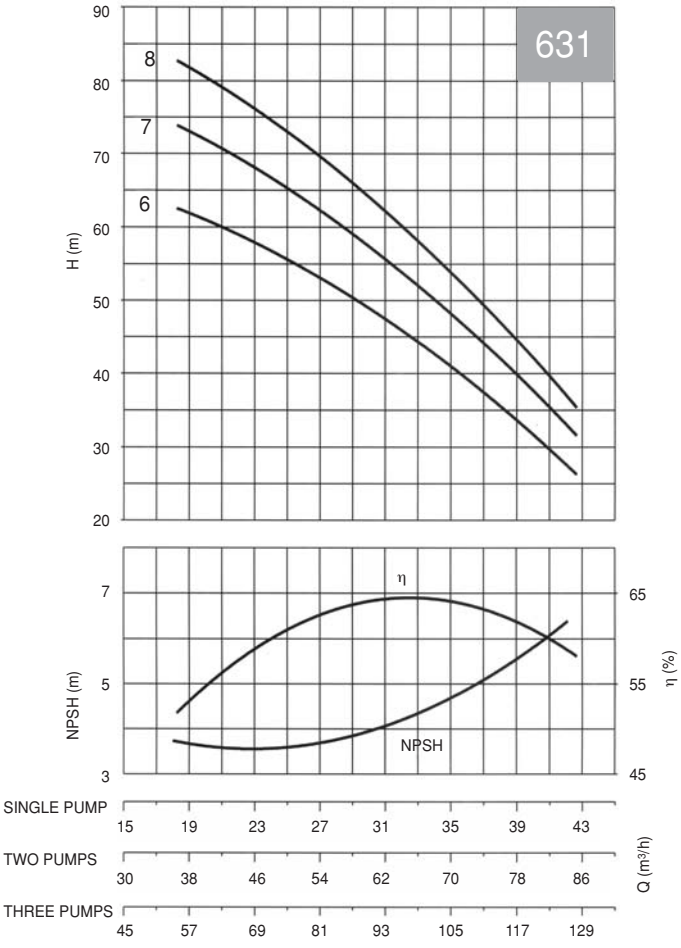


ALD 600 Series Pump Performance Curves



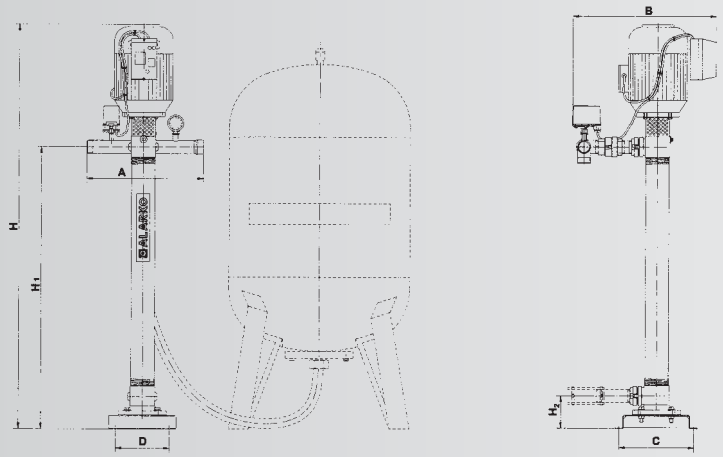






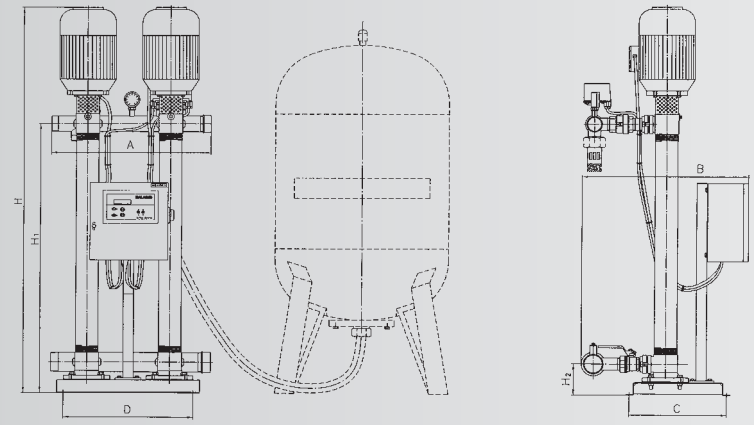
Dimensions

SINGLE PUMP WATER BOOSTERS



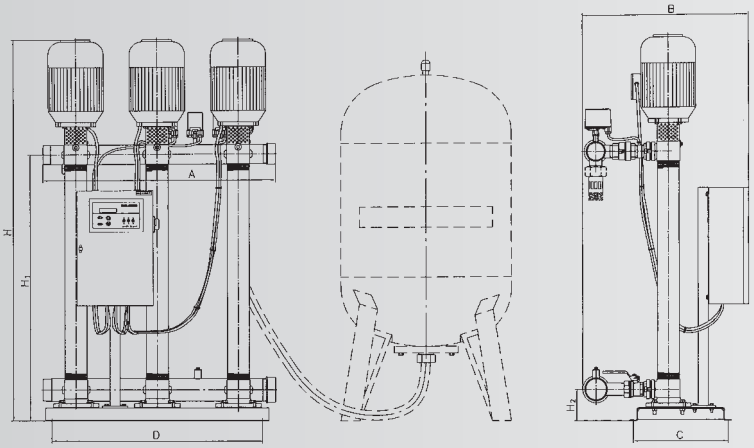
TYPE	A	B	C	D	H	H1	H2
403/10-1	434	477	278	200	939	578	121
403/15-1	434	477	278	200	1089	728	121
403/16-1	434	487	278	200	1136	758	121
406/11-1	434	487	278	200	1129	751	121
406/15-1	434	487	278	200	1326	923	121
406/18-1	434	496	278	200	1485	1052	121
408/10-1	434	512	278	200	1131	728	121
408/14-1	434	521	278	200	1341	908	121
408/17-1	434	533	278	200	1495	1043	121
610/8-1	514	553	308	250	1105	629	125.5
610/10-1	514	565	308	250	1214	719	125.5
610/12-1	514	585	308	250	1355	809	125.5
615/7-1	514	565	308	250	1128	633	125.5
615/9-1	514	585	308	250	1273	727	125.5
615/10-1	514	678	308	250	1320	774	125.5
620/7-1	516	592	308	250	1227	681	125.5
620/8-1	516	687	308	250	1280	734	125.5
620/9-1	516	687	308	250	1333	787	125.5
631/6-1	516	687	308	250	1281	697	125.5
631/7-1	516	687	308	250	1343	759	125.5
631/8-1	516	687	308	250	1405	821	125.5

TWO PUMPS WATER BOOSTERS



TYPE	A	B	C	D	H	H1	H2
403/10-2	616	633	378	502	939	578	121
403/15-2	616	633	378	502	1089	728	121
403/16-2	616	633	378	502	1136	758	121
406/11-2	616	633	378	502	1129	751	121
406/15-2	616	633	378	502	1326	923	121
406/18-2	616	633	378	502	1485	1052	121
408/10-2	617	669	378	502	1131	728	121
408/14-2	617	669	378	502	1341	908	121
408/17-2	617	669	378	502	1495	1043	121
610/8-2	717	738	408	650	1105	629	125,5
610/10-2	717	738	408	650	1214	719	125,5
610/12-2	717	738	408	650	1355	809	125,5
615/7-2	717	738	408	650	1128	633	125,5
615/9-2	717	738	408	650	1273	727	125,5
615/10-2	717	738	408	650	1320	774	125,5
620/7-2	719	761	408	650	1227	681	125,5
620/8-2	719	761	408	650	1280	734	125,5
620/9-2	719	761	408	650	1333	787	125,5
631/6-2	719	761	408	650	1281	697	125,5
631/7-2	719	761	408	650	1343	759	125,5
631/8-2	719	761	408	650	1405	821	125,5

THREE PUMPS WATER BOOSTERS



TYPE	A	B	C	D	H	H1	H2
403/10-3	917	650	378	830	939	578	121
403/15-3	917	650	378	830	1089	728	121
403/16-3	917	650	378	830	1136	758	121
406/11-3	917	650	378	830	1129	751	121
406/15-3	917	650	378	830	1326	923	121
406/18-3	917	650	378	830	1485	1052	121
408/10-3	917	683	378	830	1131	728	121
408/14-3	917	683	378	830	1341	908	121
408/17-3	917	683	378	830	1495	1043	121
610/8-3	1119	768	408	1050	1105	629	125,5
610/10-3	1119	768	408	1050	1214	719	125,5
610/12-3	1119	768	408	1050	1355	809	125,5
615/7-3	1119	768	408	1050	1128	633	125,5
615/9-3	1119	768	408	1050	1273	727	125,5
615/10-3	1119	750	408	1050	1320	774	125,5
620/7-3	1119	803	408	1050	1227	681	125,5
620/8-3	1119	785	408	1050	1280	734	125,5
620/9-3	1119	785	408	1050	1333	787	125,5
631/6-3	1119	785	408	1050	1281	697	125,5
631/7-3	1119	785	408	1050	1343	759	125,5
631/8-3	1119	785	408	1050	1405	821	125,5

Tüm ölçüler mm'dir.

Membraned Tank and Selection

It should be used with the water booster.

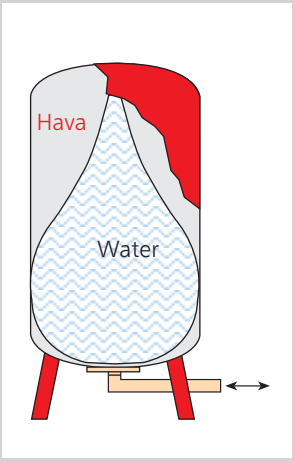
- Decreases the operation cycle of the pumps by storing pressurized water.
- Absorbs the pressure shocks from the plumbing.
- Not included in the water booster set.

Healthy, Clean Water

Certainly should be used with the water booster.

- Membranes, which are manufactured of EPDM, one of the strongest elastic materials, are used in pressure balancing tanks.
- They are of hygienic type, which can be used in food applications. Does not give off a smell. Does not produce bacterium.
- Air porosity is 4 times less than natural rubber. So, air cannot enter in the water and the tank pressure does not fall easily.

Membrane Operation Principle



- Water is in the membrane, does not touch to the surface of the tank. The gap between metal surface and membrane is full of air.
- Water inlet and outlet is performed from a single pipe.
- While the pressurized water enters to the plumbing, it fills in the membrane in the same time and compresses it until the air outside the membrane comes to the same pressure value.
- When the air and water pressure equalize, the plumbing pressure has come to the required level and pressure switch stops the pump. The water under pressure meets the small amount of consumptions, when the water level in the tank decreases, the volume of the air increases and its pressure decreases. Pump starts to operate.
- The bigger the tank, the less the energy consumption. Motor, pressure switches, valves and contactors will have a longer life.

TANK SELECTION

Tank volume is calculated by the following formula:

$$V_{tank} = 0{,}33 \times Q_{max} \times \frac{(P_{max} + 1)}{\Delta P \times a}$$

Q_{max} Maximum flow rate which can be supplied by the pump to the system or the peak flow rate required for the usage point (lt/h)

P_{max} Maximum pressure in the system. (bar). For home applications, the pressure should be at least 2-3 bar higher than the minimum pressure.

P_{min} Minimum pressure in the system. If unknown, then should be calculated by the formula.

ΔP Pressure difference (Pmax-Pmin)

a Maximum allowed number of start-stops for a pump motor in an hour. (number/h)

In Ministry of Public Works "1999 Unit Price and Definitions Book", this number is max. 180 for an hour for the motors up to 1,1 kW. also it max. 40 for an hour for the motors more than 1,1 kW.

V_{tank} is minimum volume of the tank.
A bigger tank can be used.
The bigger the volume of the tenk, the less the pressure differences in the water, less noises in water booster, longer life for the motor less energy consumption.
A smaller tank can be selected in the industrial applicetions in which the water consumption rate is standard considering the social usage.

Selection Example:

Membraned tank volume and pressure calculation for 7 storeys, 21 flats building.

Q_{max} = 3.600 lt/h (Water booster select Ex.1)
P_{max} = 6 bars
ΔP = 2 or 3 bars. Assume as 2 bars
a = 40 olarak alalım.

$$V_{tank} = 0{,}33 \times 3.600 \times \frac{(6+1)}{(2x40)} = 103{,}9 \text{ lt.}$$

So, a 100 lt tank can be selected.

- Manometer is present on tanks bigger than or equal to 100 lt.
- The pressure of water in the fittings can be traced by the manometer, while the water booster is operating.
- If the water in the tank is emptied, manometer shows the air pressure in the tank.
- The operating pressure of the tank should be more than or equal to the pressure which the pump can supply in closed valve condition.

Alarko water boosters are manufactured in this facility...

ALARKO CARRIER GEBZE FACILITY-ACGK

ACGK, has a closed area of 36.800m^2 on 60.500 m^2 property in Gebze Organized Industrial Zone. The construction has begun in ist July 1999 and finished in ist November 2000. Air conditions, fan coils, radiators, burners, cooling group, cooling tower, circulation pumps, water boosters are manufactured in Main Manufacturing Facility which is certified by ISO 9001. Panel radiators are manufactured in Radiator Manufacturing Facility, which has 1.800 m^2 open, 9.250 m^2 closed area in Dudullu Organized Industrial Zone. The number of employees in Alarko Carrier manufacturing facilities is 650, 324 employees in management, sales and marketing departments, 22 employees in research and marketing department and in total 996 employees.

The company reserves its right to alter its products due to technological developments.

ALARKO
Carrier
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